

## METHOD OF PRODUCING WHITE NOISE, CONTROL METHOD OF WHITE NOISE AMPLITUDE, AND DIGITAL TELEPHONE SYSTEM

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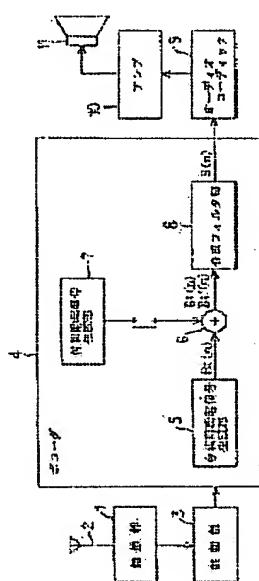
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### Abstract of JP 2000081898 (A)

**PROBLEM TO BE SOLVED:** To realize a white noise producing method capable of preventing a jar from being generated. **SOLUTION:** When, a frame to be processed is in a frame error state, a last effective frame before the frame to be processed is full-rated or half-rated, and a mean adaptive code book gain value is less than 0.4 at the time and a mean fixed code book gain value exceeds a threshold, white noise ( $S(n)$ ) is generated by generating an additional exciting signal by using, instead of the mean fixed code book gain, a prescribed constant with which the amplitude value of an exciting signal after synthesis ( $E't(n)$ ) becomes less than a constant value, adding the additional exciting signal to an exciting signal before synthesis ( $Et(n)$ ) to generate the exciting signal after synthesis ( $E't(n)$ ), and processing the exciting signal after synthesis ( $E't(n)$ ) by synthesis-filtering operation.; Consequently, it is possible to control the amplitude of the white noise ( $S(n)$ ) by controlling the amplitude of the exciting signal after synthesis ( $E't(n)$ ) outputted from a vocoder 4, and prevent jarring noise from being generated.



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## (54) METHOD OF PRODUCING WHITE NOISE, CONTROL METHOD OF WHITE NOISE AMPLITUDE, AND DIGITAL TELEPHONE SYSTEM

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To realize a white noise producing method capable of preventing a jar from being generated.

**SOLUTION:** When, a frame to be processed is in a frame error state, a last effective frame before the frame to be processed is full-rated or half-rated, and a mean adaptive code book gain value is less than 0.4 at the time and a mean fixed code book gain value exceeds a threshold, white noise ( $S(n)$ ) is generated by generating an additional exciting signal by using, instead of the mean fixed code book gain, a prescribed constant with which the amplitude value of an exciting signal after synthesis ( $Et'(n)$ ) becomes less than a constant value, adding the additional exciting signal to an exciting signal before synthesis ( $Et(n)$ ) to generate the exciting signal after synthesis ( $Et'(n)$ ), and processing the exciting signal after synthesis ( $Et'(n)$ ) by synthesis-filtering operation.

Consequently, it is possible to control the amplitude of the white noise ( $S(n)$ ) by controlling the amplitude of the exciting signal after synthesis ( $Et'(n)$ ) outputted from a vocoder 4, and prevent jarring noise from being generated.

